LIAS LIME.

In passing through Dunster, from Minehead to Watchet, as all the buildings in that country were erected with *lias lime*, I took care to remark the appearance of every kind, both wet and dry, and though the workmanship in general appeared but coarsely performed, yet the mortar bore to me the evident marks of being excellent, for wherever I saw it, however coarsely it was done, yet it appeared full and flush in the joints, without cracks, losing its original skin, or becoming crumbly, as often is the case with mortar of a tender kind after having gone through two or three winters or more; and in one place I remarked the foundation of a little bridge, that by some accident had been driven down, but the mortar over which the current was making its way, I found, on trying it with my knife, to have acquired such a strong hardness as, with a coat of moss, effectually secured it from the action of the water; still it was inferior in hardness to the same lime mixed with terras or pozzolana. It will, perhaps, seem wonderful, that for a lime so excellent in quality there should be no great demand, for, in reality, I found but one small lime kiln, and that not kept constantly at work; but considering that it does not suit the purposes of agriculture even upon the very spot where it is produced, the wonder will cease. The limeburners themselves told me that for the use of their own farm they were obliged to get lime from the rocks of *St. Vincent*, near Bristol hotwells; or of a similar quality at a distance of not less than 46 miles; for they had to'd me, were they to lay their own lime, though reduced to a fine powder, upon the land, the first shower of rain would turn it all to stone, without affording any sensible cultivation to the land, and as the *St. Vincent* rocks are somewhat like the *Plymouth marble*, this circumstance affords another proof that the qualities of lime for different uses, *do not depend upon the hardness*, but upon the specific qualities of the stone from which it is burnt. This lime, if burnt to a due degree, and quenched hot from the kiln, falls freely to powder; and to prevent its imbibing moisture from the air, should be mixed up as soon, or hot, as possible for works under water. Lias lime, slaked at the kiln and packed in light casks, preserves its virtue for a considerable length of time. I had now determined as to the composition of the mortar for the Eddystone.—*Smeaton.*

RAILWAYS.

South Eastern Railway.—In consequence of the late heavy rains, and the engineering operations in the great blast, an immense fall of chalk has taken place at the bottom of the cliff on the east side of Abbott's Cliff Tunnel, which has for the present completely blocked up the entrance, and will occasion great expense, loss of time, and labour, to remove the obstruction, and we fear delay the time of opening to Dover beyond the appointed time. Above the fall to the top, the cliff looks in a very dangerous state, with a deep fissure in the middle; and if it does not fall, there is little doubt it must be taken down or blown up before any train can with safety travel below.

Margate.—Plans have been made and estimates proposed for an atmospheric railway from Ramsgate to Margate. The idea of a railroad from Ramsgate to Margate has been many years in agitation, and, after being dormant for some time, is now revived with increased energy. The contemplated atmospheric railway is to be on the plan adopted between Dublin and Kingston, and there found perfectly practicable and successful.—*Dover Paper.*

The sum of 11,970*l.* has been sold out of the British funds by direction of the Right Hon. the Paymaster-General of the Forces, for the purpose of securing a plot of land at present contiguous to Chelsea College, but which is to be added to the grounds of that institution. This sum is the residue of the munificent legacy bequeathed in trust by the late Colonel Drouly, formerly Captain of Cowes Castle, to the Lords and others, commissioners of the above establishment, for the benefit of its pensioners. The first portion of this donation was expended in the purchase of the site of the once celebrated "Ranelagh," which adjoined the eastern boundary of the College, and which was converted into gardens and pleasure-grounds for the use and recreation of a select number of veteran in-pensioners.—*United Service Gazette.*

GRAND CANAL OVER THE ISTHMUS OF SUEZ.

The project of cutting a canal across the Isthmus of Suez is attracting a great deal of attention both here and in Egypt. By our last advices from Alexandria, we learned that a young Arab, who, having studied engineering in Europe, had returned to Egypt, gave it as his decided opinion that a canal would be preferable to a railroad, the question having been seriously put to him by the Pasha. Here several pamphlets have made their appearance, and the subject is discussed in all its bearings, reference being made in some instances (especially in a pamphlet by Mr. Clarkson) to an ancient canal, mentioned by Herodotus, to illustrate the feasibility of the scheme. The most practical observations seem to have been elicited by the report of M. Adolphe Linant, a French engineer, who has now been for several years in the service of Mehemet Ali. The results of an elaborate survey of the isthmus by this gentlemen are, that the nature of the soil and the chain of lakes present great facilities for excavating a canal; that the Red Sea at Suez being 32 feet higher than the Mediterranean at Pelusium, the water let into the canal would form a perpetual current flowing with great velocity; and that a breakwater or pier might be constructed on the bar formed at the embouchure of the canal in the Mediterranean, to shelter vessels anchoring off its entrance.—*Times.*

The estimated cost of this great work is four millions sterling. The total shipping to and from Europe on account of the Eastern trade is reckoned at one million tons per annum, and its value twenty-six millions. This canal would effect a saving of four or five weeks by sailing vessels, and a diminution of insurance risk to the amount of 50,000*l.*; this, with a toll of 8*s.* per ton upon one-fourth the amount of tonnage as above, and 50,000*l.* for passenger traffic, mails, and parcels, would give 5 per cent. return upon the outlay.

The value of this project, however, is at present in a state of complete uncertainty. The surveys on which it is based yet want verification. Nevertheless, the temptation of affording the same facilities in the carriage of goods that are at present enjoyed in the carriage of letters is so great, that calculations, even on an assumed practicability, cannot be deemed premature.

CHURCH DESECRATION.

The church of the Holy Trinity, Deerhurst, near Tewkesbury, will be known to some of our readers as associated with the history of S. Alphege and the Venerable Bede, and as being one of the most curious and interesting of our Saxon churches. The chancel has been long pulled down. The eastern end of the nave, now converted to supply the want of one, is fitted up with arabesque woodwork running round north, south, and east walls, while the holy table stands lengthwise in the middle, according to the old puritanical arrangement which has in this case been suffered to remain. The monastic buildings, what is left of them, are now turned into a farmhouse, and the site of the former chancel forms part of the present farm-yard, the pigsties of which actually abut on the east wall of the church, and occupy the position of the original altar. This, too, in a church of which the rural dean of the district is incumbent! The churchyard contains the burial-place of the Coventry family, and two hay-stacks.—*Ecclesiologist.*

Correspondence.

Sir,—I have no doubt many of your readers will appear a little astonished at the letter of "Guillaume Le Jeune," in your 43rd number, the tone of which, to say the least, is not very encouraging. True it is, that the "Church in the Classic style," or the "Cottages" of the "Practical Builder" are not precedents many would wish to follow; but gentlemen ought to bear in mind, the building public do not live altogether by erecting palaces or churches,

The "Washington Memorial," if not a weighty matter, is at all events a *high one* to write a dissertation on, taking into account the scanty materials furnished by the American newspaper, as noticed in your Leader of the 25th ult. In my humble opinion, it is rather premature in "Guillaume le Jeune" to enter the lists against Mr. Pollard under these circumstances.

The most serious part of the subject remains to be explained, and that is the "galvanising," which, if the question was really in earnest, would have the effect of upsetting his countryman's (Sorel's) patent. J. K. L.

Killarney, December, 1843.

Sir,—Living in a part of the country amidst large farms, I wish either you or your kind correspondent "P. T." would tell me where the five-acre farms are adopted; whether they are sufficiently large for a man and small family to obtain a livelihood on without being employed as a day labourer? and also, what is the system of cultivation which they adopt; and whether there is a work published on the small farm system that can be recommended? By answering these in your valuable paper, you will confer a great favour on a casual labourer.

I remain yours respectfully,

Spalding, December 9. H. X.

[We recommend to our correspondent Col. Blacker's pamphlet on small farms, it may be had of Ridgway, Piccadilly, through a country bookseller; he will there see how much may be done by the soiling system, and we dare say will come to the conclusion that with proper efforts, and a wise system of economy in the employment of his family, a comfortable living may be enjoyed on a five-acre farm. We wish ten thousand such farms could be created in this overgrown and over-monopolized country. We greatly desire that some of our practical farmstead builders, architects we may most honourably entitle them, would turn their attention to uniting the ingenious in arrangement with the picturesque in character, so as to render attractive under the guise of art what is so eminently entitled to be regarded as such in all the respects of a wise and generous national policy. A district studded over with small and beautiful farmeries of the class we advocate, would be quite as pleasing as street rows, and infinitely more susceptible of adornment and general interest.—Ed.]

TRURO MARKET COMPETITION, AND THE LEICESTER MONUMENT.

Sir,—After forwarding to you my remarks on the Truro market competition, under date of the first of this month (which you have considered worthy of insertion at length in your journal of this week), I observed another letter in your paper of Saturday last, in which it is boldly asked "Is it *honourable* that some of the many (competitors) should prepossess a portion of the body (committee) in favour of some nice blue sky or finely-painted pig, whilst they know their fellow-competitors would either not stoop to such irregularity, or not have the means to *make* the opportunity?" I would simply beg to ask, is your correspondent able and willing to prove what he here asserts, for his statement amounts to more than an *insinuation*, though "conveyed under the form of a *question?*" and are the parties alluded to as some of the "many" (who, I take it for granted, see or hear of your paper, if they see or hear of any journal connected with their profession), ready and willing either to rebut it, or do they consider that silence on the subject is the best resort remaining to them, even though it may be interpreted as an acknowledgment of their ——— ?

Regarding the Leicester monument, I see that a correspondent, "J. B.," from Norwich, 28th ult., states that "E. B. T.'s" communication is at variance with the answer he has received from the *honourable secretary*. It may be so; but having myself this *week* received from the *chairman* a reply similar to that given to "E. B. T.," I consider it right to mention it as a hint to the wise, lest it may hereafter turn out that between "Two ——" the competitors, *en masse*, fall to the ground.

Your constant reader, Φ.

Saturday, Dec. 9th, 1843.

SAUVAGE, THE INVENTOR OF THE SCREW PROPELLER.

Sir,—In your number for Aug. 5th, you were pleased to insert a letter of mine, signed, "A Friend to Inventors," calling the attention of your readers to the hard case of a Frenchman named Sauvage, the inventor of the screw propeller, destined to replace the paddle wheels, which incapacitate steam-vessels for war, then in prison at Hâvre for a paltry debt, contracted by the necessary expenses for bringing his invention into notice.

"*Nul n'est prophète en son pays*" is a maxim too well known to dwell upon; and thus, nothwithstanding many energetic appeals on the part of sundry French writers, Sauvage appeared destined to waste his best years, if not to end his days, in prison, while the *Napoléon*, built at Hâvre, and

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